



HABIT OF TELEVISION VIEWING AND ITS IMPACT ON WEIGHT STATUS AND BEHAVIOUR AMONG SCHOOL CHILDREN

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ABSTRACT

Background: Television viewing whether boon or bane, is an ongoing controversy. Today, it is an important area of research; however studies in this aspect are limited. To fill up the lacunae in this regard, the study was undertaken to assess the television viewing habit and its impact on weight status and behavior among school children. **Methods and Material:** Hundred (100) children, both male and female between the age groups of 10 and 14 years were selected from Chennai school by purposive sampling technique. Information was collected by pre structured self administered questionnaire. The data obtained was subjected for analysis by using descriptive and inferential statistical analysis. **Results:** Out of 100 children 50 were Male and 50 were Female. 24% of children had good habit of TV viewing in contrast with 76% of children who showed moderately good habit, none of them exhibited poor habit of TV Viewing. Majority of the children (62%) were underweight where as 23% were overweight. TV viewing showed an impact on certain aspects of behaviour such as eating (46%), physical activity (43%), Study habit (25%), emotion (43 %), sleeping (40%), and overall (39%). **Conclusions:** TV viewing had direct role in the behavioral change of the children. It had significant effect on sleep habits, school performance and weight status.

INTRODUCTION:

Exponential advancement has taken place in the electronic media. Electronic games, Interactive Compact Disc- Read Only Memory (CD-ROM) and innovations in television are among the various advances since last decade. These electronic medias has shown both pros and cons for parents and children. TV has become an integral part of student's life. Children get attached watching programme like cartoons, cinemas, animal planet, and various telecasts on TV. Despite the emergence of new media technologies, television remains the most widely used screen media format. Unfortunately, concern has arisen about its effects on the health and well-being of children and adolescents. Television being an integral part in today's life attracts children who spend hours watching both suitable and unsuitable programmes. The television acts as a baby sitter and has become the most important media for any age group, especially children who are easily attracted towards this media. Television is a source from which children gain information about life and experience different types of behavior. It gives children a distorted image of the world, as children have difficulty in discriminating reality from fantasy. Meta analyses investigating the relationship between violence viewed on television and aggressive behavior in children and concluded that exposure to violence on television was associated consistently with children's aggressive behavior.¹ Other studies have blamed television for causing conduct disorder, social skill difficulties, anorexia nervosa, nutritional changes, obesity, and substance abuse negatively affecting sexuality and body concept and self image.²

Obesity in children is a complex disorder. Its prevalence is increasing in recent years. Many factors including hormonal influence, genetics, socioeconomic status, nutritional status, eating habits, sleeping pattern and environment are believed to play a significant role in obesity. A study conducted in the past revealed that 21.4% private school students and 3.6% government school children Chennai, India were found to be obese.³ It is stated that television viewing offers ample time for food consumption in children. Few studies have also found high levels of TV viewing, associated with reduced nutritional quality.⁴⁻⁸ Though various studies have been done to associate the Television viewing with sleep pattern, food preference, food habit, violent behavior and moral formation, however to the best of our knowledge this is one of the very few studies to compare the impact of TV viewing on weight status and behavior of school children. Hence the present study was aimed to explore the television viewing habits, determine the weight status and identifying the behavioral pattern among school children and correlating the habits with weight status and behavior of the school children, viewing television.

METHODS AND MATERIALS:

A descriptive research design questionnaire based study was conducted to assess the habit of television viewing and its impact on weight status and behavior among the school children, Mangadu, Chennai, India. Permission was obtained from the school authorities. One hundred (100) students, with an age range of 10 to 14 years, studying from 5th to 8th grade were selected by purposive sampling. The study was explained to all the selected participants and the consent was

obtained from them, and their parents. The ethical clearance was obtained from Institutional Ethical Committee (). The self administered questionnaire which was written in English and validated through a pilot study was distributed among the subjects. Structured questionnaire consists of four parts.

- Part-1 the Demographic variables such as age, gender, class of study, educational status of the parents, Occupational status of the parents, Number of siblings and type of family were taken from the school records with the permission of the principal.
- Part-2 Rating scale was used to assess the habit of TV viewing which included 14 items. The items included were, duration of watching TV, Position of the child while watching TV, Type of programme being watched by the child, getting permission from the parents to watch TV and distance from child and TV while watching programme. The results were categorised as Good habit, moderately good habit and Poor habit according to the scores of the scale (Score 1-Poor habit, Score 2-Moderately good habit, Score 3-Good habit).(Questionnaire-1)
- Part-3 Rating scale was used to assess the Impact of television viewing on behaviour of the children. It includes 44 items with five areas such as Eating, Physical activity, Study habit, Emotion and Sleeping. The level of impact is dividing into High, Moderately high and Low Impact depending on the scores (Score 1-Low impact, Score 2-Moderately high impact, Score 3-High impact).(Questionnaire-1)
- Part-4 Measurement of Height and Weight. To find out the obesity in children based on the height and weight BMI was calculated and the children were divided into following categories as per the WHO guidelines (2007), BMI<18.5 = Under Weight, BMI<18.5 to 24.9 = Normal Weight, BMI<25 to 29.9 = over Weight, BMI>30 or greater = Obesity.

Each participant was asked to respond to each item according to the response format provided in the questionnaire. The participants received a full explanation of how to fill in the questionnaire. The selected subjects actively responded accordingly. Anonymity of the respondents was assured.

STATISTICAL ANALYSIS:

A statistical software programme (SPSS version) was used for data analysis. Descriptive statistics was used to analyze Frequency, Percentage and Mean in all the aspects such as demographic variables, habit of TV viewing, behavior and weight status. Chi square was used to identify the association between demographic variables, habit of TV viewing, behavior and weight status. Karl Pearson correlation was used to correlate behavior and weight status with the habit of TV viewing. P<0.05 was considered as a level of significance.

RESULTS:

Among the 100 students between the age ranges of 10-14 years, 50% were males

and 50% were females. To maintain the homogeneity an equal no of children (25) from each class (5th 6th 7th & 8th) were taken into consideration. Education status of the parents showed that 52% Fathers and 30% mothers were graduates. With regard to siblings 67% of the participants had no siblings, 20% had one sibling and rest had more than one. The occupation of the parents revealed that 99.9% fathers were employed and 30% mothers were employed. Also Majority of the children (79%) lived in nuclear family. (**Table-1**)

Present study revealed that there is a significant association between selected demographic variables such as occupational status of mother ($\chi^2=6.58$), no of sibling ($\chi^2=6.72$) type of family ($\chi^2=7.98$), class of study $\chi^2=7.84$, with the behaviour of the children. The results also revealed that there is a significant association between selected demographic variables such as No of siblings ($\chi^2=8.01$), Type of family ($\chi^2=4.21$) with the habit of TV viewing. The findings of the study also demonstrate that there is no significant relationship between TV viewing and weight status. (**Table-1**)

The data reveals that out of 100 children, 24% had good habit of TV viewing in contrast with 76% of children who had moderately good habit where as none of them had poor habit of TV Viewing. (**Figure 1**). Majority of the children (62%) were underweight where as 23% were overweight and 15% were within normal limits. (**Figure-2**). There was a change in certain aspects of behavior such as eating (46%), physical activity (43%), Studying habits (25%), emotion (43 %), sleeping (40%), and overall behavior (39%) of the children watching TV (**Figure-3**)

When TV Viewing habit was correlated with behavior and weight status, there was a statistically negative correlation between habit of TV viewing and weight status. ($p>0.05$, $r = -0.06$). Whereas, there was statistically significant positive correlation between the habits of TV viewing with the overall behavior of the children ($p>0.05$, $r = 0.483$) (**Table-2**) as well with the selected behaviors such as eating, studying, emotion, sleeping, physical activity and over all behavior (**Table-3**)

Table: 1
Distribution and Association of Habit of TV viewing, behaviour, weight status with selected demographic variables among school students.

N = 100

Sr. No.	Variable	Frequency & Percentage	χ^2 Habit of TV Viewing	χ^2 Behaviour	χ^2 Weight status
1.	Age in years 10-12 years 12-14 years	50 50	0.216 (NS)	2.62 (NS)	1.92 (NS)
2.	Gender Male Female	50 50	0.451 (NS)	0.85** (NS)	0.863 (NS)
3.	Class of study 5 th std 6 th std 7 th std 8 th std	25 25 25 25	0.926 (NS)	7.84 (S)	2.49 (NS)
4.	Educational status of the father Uneducated Primary Education High School Higher Secondary Under Graduate Post Graduate	01 02 04 28 13 52	1.593 (NS)	5.22 (NS)	0.649 (NS)
5.	Educational status of the Mother Uneducated Primary Education High School Higher Secondary Under Graduate Post Graduate	03 20 25 02 30 20	6.22 (NS)	4.13 (NS)	4.64 (NS)
6.	Number of Siblings None One Two Three	67 20 08 05	8.01(S)	6.72 (S)	7.09 (NS)
7.	Occupation of the Father Unemployed Government Employee Non-Govt Employee Business/Self Employed	01 27 32 40	1.65(NS)	2.62 (NS)	0.427 (NS)
8.	Occupation of the Mother Unemployed Government Employee Non-Govt Employee Business/Self Employed	70 11 11 08	4.32(NS)	6.58(S)	2.48(NS)
9.	Type of Family Nuclear Joint	83 17	4.21(S)	7.98(S)	3.69(NS)

S-Significant, NS-Not Significant, Level of significance ($p < 0.05$),

Table: 2
Correlation between habit of television viewing with weight status and behaviour

Variable	Mean	SD	r value
Habit of TV viewing	12.9	2.48	- 0.058 (NS)
Weight Status	15.8	2.69	
Behaviour	34.1	9.93	0.483 (S)

NS- Not Significant, S-Significant

Table: 3
Percentage and correlation of impact of TV Viewing with selected behaviour

Variable	Mean	SD	r value
Eating Behaviour	10.8	3.20	0.498 (S)
Study Habit	5.47	2.96	0.378 (S)
Emotional behaviour	8.59	4.16	0.435 (S)
Sleeping behaviour	3.95	1.67	0.639 (S)
Physical Activity	6.01	2.19	0.586 (S)
Overall	34.1	9.93	0.483 (S)

($p < 0.05$) S- Significant

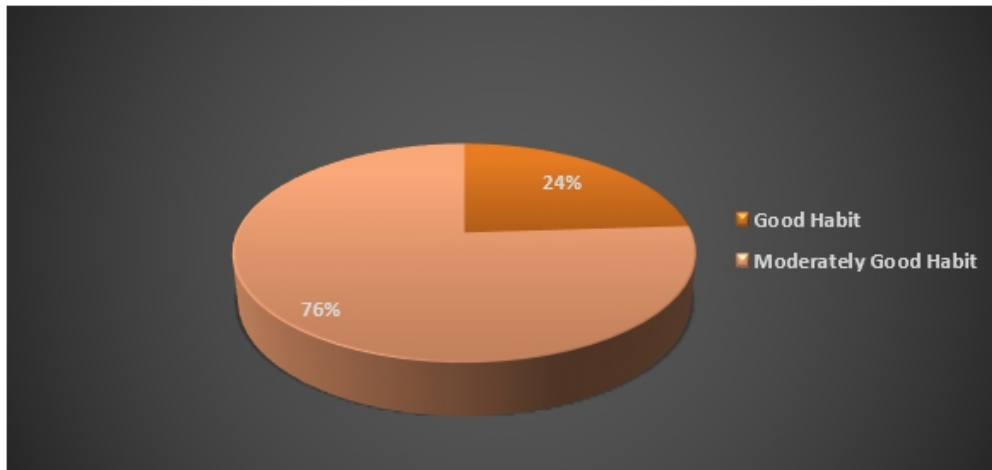


Figure 1: Percentage of TV Viewing habits among school children

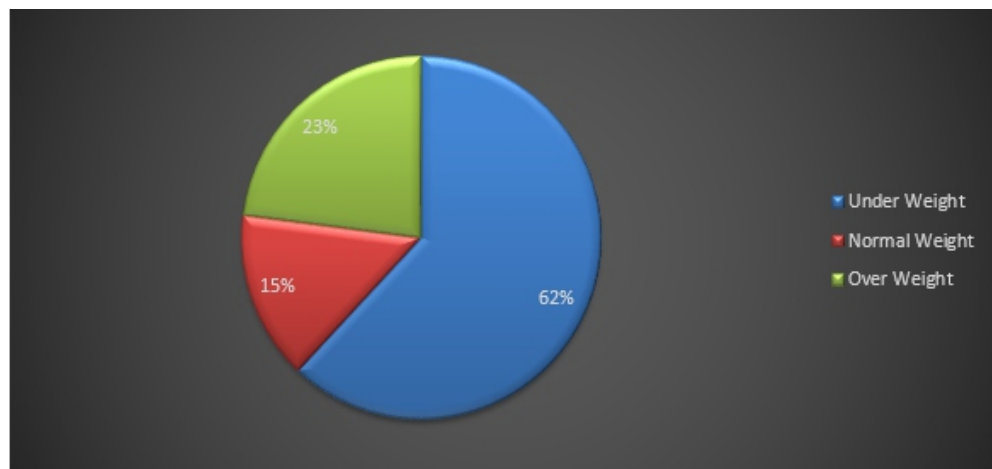


Figure 2: Weight status of children viewing television

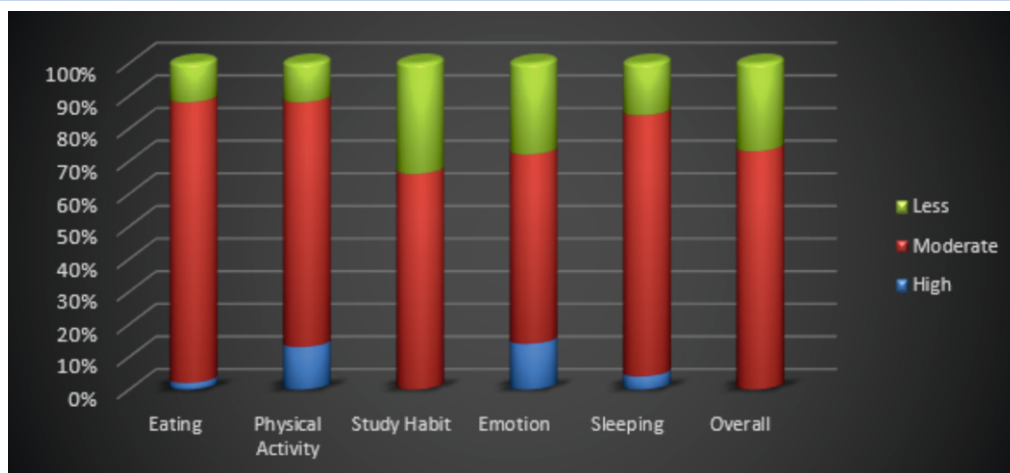


Figure 3: Percentage of change in selected behaviour in children viewing television

DISCUSSION:

Among the participants equal no of students were males (50%) and females (50%). With regard to the education of the parent's, 52% fathers and 30% mothers were post graduates. The occupation of the parents revealed that 99.9% fathers were employed whereas 70% mothers were unemployed (House Wives). In our study there was no significant association found between habits of TV viewing and occupation of the parents. This is in consistent with the findings of Chris et al where in his study, 100% of fathers and 47% of mothers were employed. However he didn't find any association between occupation of the parents and TV viewing habits. We observed that unemployed mothers tend to watch TV at home which influenced the children to watch TV programmes along with them. We didn't find any association with the occupation of the parents. The results of Chris et al revealed that 48% lived in nuclear family. He didn't find any association with the type of family and TV viewing habits. In contrast, our study findings showed a good association with the type of family and TV viewing habits. It was noticed that the children lived in nuclear family were more prone to watch TV since most of the parents were working and their kids didn't have any quality leisure time activity. (Table 1)

In our study when demographic variables were assessed to find out the association with change in the behavior of the children, the results revealed that there was a significant association of behavior with number of siblings, occupational status of the mother and type of family. In our study students without siblings (67%) showed more aggressive behavioral changes and spent most of the time in watching TV only. (Table 1). This was in consistent with the findings of Chris et al where only 2% of the students were without siblings and showed no association with the behavior. In our study, occupational status of the mother significantly associated with the behavior of the children. Since 70% of the mothers was unemployed. It is likely that they engaged in household activities, not spending adequate time with the children that may have affected the behavior of the children. In our study type of family also significantly associate with the behavior of the children, 83% lived in nuclear family (Table 1). This was in accordance with the analysis done by Asian Media Information and Communication Centre (AMIC), "The narrative style will always be the most entertaining as story telling has always been an integral part of our culture. And today in nuclear families, the TV serials have in a way substituted for the stories grandparents used to tell their grandchildren". It is likely that in nuclear families, starts spending more time in TV viewing the child become more adamant, aggressive and demanding from working parents which might change the overall behavior.

When we correlated, the TV viewing habits with the weight status and behavior, we found positive correlation with the overall behavior. This was similar to the findings of Chris et al and Rachel J who also found positive correlation between TV viewing habits with the behavior of the school going children. It is likely that the adolescent children, when they watch TV programmes they are unable to differentiate between reality and fantasy. They tend to imitate the characters which influence their overall behavior. We didn't observe any positive correlation with the weight status (Table 2). This was in contrast with the study findings of N.G.Patil et al, who found positive correlation between TV viewing habits and weight status of the school going children.

In our study there was significant correlation between TV viewing and eating behavior of the children ($p > 0.05$, $r = 0.483$) (Table 3). These findings were in contrast with the study findings of Hancox RJ, et al, who stated that overweight and obese children consumed fast food, more frequently while watching television than normal weight children. In our study 62% of the students were under weight. Hence it is likely that TV viewing would have with reduced the nutritional quality in the diet, pattern and duration in the children.

The findings of the study reveals that there is a significant positive correlation between habit of TV viewing and study behavior of the children ($p > 0.05$, $r = 0.483$) (Table 3). This was similar to the findings of Sharif I et al, observed that, time spent on media use could simply displace time spent doing other activities that promote academic performance, such as doing homework or reading books. Viewing certain types of adult content could affect school performance by increasing adolescents' involvement in risky behaviors, such as consumption smoking and alcohol, resulting in decreased motivation at school.

In our study the significant correlation existed between habit of TV viewing and emotional behavior of the children ($p > 0.05$, $r = 0.405$) (Table 3). This was in consistent with the report of themes Freeman who stated that most of the films, TV serials and other programmes consists crime and sex. Children attract too easily with the characters in TV or in films and assume these habits and fantasy adventures as true. They follow exactly what is shown in TV which affects their emotional behavior.

There was a significant correlation between habit of TV viewing and sleeping behavior of the children ($p > 0.05$, $r = 0.39$) (Table 3). This was supported by the findings of Reddy R et al, that 12.6% of students had head ache, 11.5% had eye strain, 1.8% were overweight and 0.4%, had neck pain. Ows et al stated that there was a change in the sleeping behavior of the children on TV viewing. TV viewing, specially the viewing violent programme at night appears to have great impact on sleep of a child. This may affect the onset and duration of sleep. The

reason might be hormonal; sitting ourselves in front of the screens appears to trick the body into believing it's still day time, as the light impairs the secretion of the hormone melatonin, which is really important for sleep.

The findings of the study revealed that there was a significant correlation between habit of TV viewing and physical activity of the children ($p > 0.05$, $r = 0.352$) (Table 3). This was in accordance with the findings of Marshall et al and Dutra GF et al who stated that the viewing television was an entertainment for the entire family. Mother and child watching TV together was considered to be a form of entertainment. In his study Dutra GF et al reported that 58% of children preferred indoor games rather than outdoor because they didn't want to miss their favorite programme in the TV. It is observed that the time spent by the child in TV viewing may substitute for other less sedentary and / or less passive activities like playing outdoor games and engaging in sports activities.

Our study showed the overall changes in the behavioral pattern of the children viewing Television.

CONCLUSION:

TV, interactive video games, and the Internet can be excellent sources of education and entertainment for kids. But too much screen time can have unhealthy side effects. That's why it's wise to monitor and limit the time children spends playing video games, watching TV, and on the computer and the Internet. Hence it is essential to educate the children, parents and teachers to reduce the TV viewing habit by the children. It also a good choice to make sure kids have a wide variety of free-time activities like reading, playing with friends, and sports, which can all play a vital part in helping them develop a healthy body and mind.

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